

Work Order ID 69901

Tuesday, May 24, 2011 12:56:28 PM



Page 1

Item ID: D6103-003

Accept



Setup Start



Revision ID:

Stop



Item Name: Round Billet, Aluminum

Start Date: 5/24/2011 Start Qty: 16.00



Cust Item ID:

Required Date: 5/31/2011 Req'd Qty: 16.00



Customer:

Reference:

Approvals:

Process Plan:

Date: 11-05-24 Tooling:

Date:

QC:

Date: SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D6103

Rev B

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 14160 ☐ a) Description: Alluminum round billet ☐ b)
Ø3.500" x 12.500" long ☐ c) Tolerance on all dimensions are +0.030"/-0.000"
☐
d) Material: 7075-T7351 (QQ-A-225/9) ☐ Material certification required

CL 11/05/25 (16)

110

0.00



Receive & Inspect for Damage & Mat'l Certs

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

P4/4/6 (16)

120

0.00



QC6- Inspect dimensions to drawing

QC

Memo

0.00

Quality Control

CL 11/05/6 (16)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 69901

Tuesday, May 24, 2011 12:56:28 PM



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Item ID: D6103-003

Accept



Setup Start



Revision ID:

Stop



Item Name: Round Billet, Aluminum

Start Date: 5/24/2011 Start Qty: 16.00



Cust Item ID:

Required Date: 5/31/2011 Req'd Qty: 16.00



Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

Identify as per dwg & Stock Location: CNC

0.00



Packaging

Memo

0.00

11/6/16

16

Packaging

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/6/16
me
11-06-06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, May 24, 2011 12:56:34 PM

Page 1

Work Order ID: 69901

Parent Item: D6103-003

Parent Item Name: Round Billet, Aluminum



Start Date: 5/24/2011

Required Date: 5/31/2011

Start Qty: 16.00

Required Qty: 16.00

Comments: IPP Rev:A New Issue 06-02-09 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6103-003P  round alum billet		Purchased	No			110	Each	0.0000	1 	16			

Pay/c/c (16)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

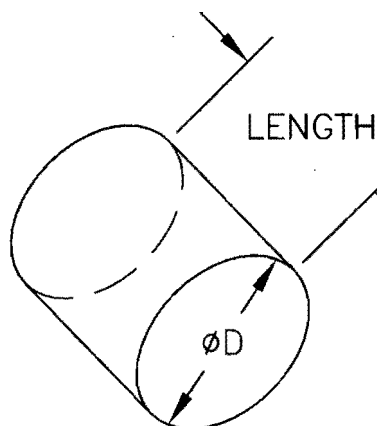
NOTE: Date & initial all entries



DESIGN <i>PH</i>	DRAWN BY <i>PH</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>HE</i>	APPROVED <i>HE</i>	DRAWING NO. D6103	Rev. B SHEET 1 OF 1
DATE 06.01.31		TITLE ROUND BILLET, ALUMINUM	SCALE NTS
A	01.04.10	NEW ISSUE	
B	06.01.31	ADD D6103-003	

SPECIFICATION CONTROL DRAWING

RELEASED
06.02.07



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 69901

PH11-05-24

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	D (Diameter)	Length
D6103-001	7075-T6/T651 (QQ-A-200/11 OR QQ-A-225/9)	Ø3.250	12.50
D6103-003	7075-T7351 (QQ-A-225/9)	Ø3.500	12.50

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO14250**

Purchase Order Date 5/25/2011

PO Print Date 5/25/2011

Page Number 1 of 1

Order From :

VC-MET001

METAUX CASTLE

A.M. CASTLE & CO. (CANADA) INC. - BOX B9204 PO BOX 9100
TORONTO, ON M4Y 3A5
CA

Contact Name

Vendor Phone

514 694 9575

Vendor Fax

514 695 3281

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA



e-mail invoice

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D6103-003P	round alum billet	6/8/2011 Yes	16.00 Each	Yours ppd	\$71.0000	\$1,136.00

Special Inst: AS PER DWG D6103 REV. B
B69901
MATERIAL: 7075-T7351 AS PER QQ-A-
225/9
SIZE: 3.50" OD X 12.50" LENGTH
TOLERANCE ON ALL DIMENSION ARE
+0.030"/-0.000"

PO Total:

\$1,136.00

MATERIAL CERTIFICATION
REQ'D UPON DELIVERY

Change Nbr: 1

Change Date: 5/25/2011

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP

Page 1 of 1

Shipment No:837845

Ship From:		Sold To:		Ship To:		Deliver To:	
Castle Metals MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped	F.O.B.	Freight Terms		Carrier		BOL No	
03-JUN-11	ORIGIN	Prepaid		MANITOULIN		837845-2	

Shipment Details	Final Destination Branch - MON
-------------------------	---------------------------------------

Order No	Line No	Item No	Description				
1490968	1	8808.MO	3.5000..RD.7075.T7351:ALUMINUM.CF.144.0000 CUT TO 12.5 IN (+ .1250/- .0000 IN) - BAND SAW CUTTING SPECIFICATIONS:1QQ-A-225/9-5				
Purchase Order No		Part Number		Ordered Qty		Invoice Qty	
14160		YOUR ITEM NUMBER: D6103-003		16 PCS		16 PCS	
Details							
Delivery No.	Mill	Heat Number	Mech Id	PCS	Width (IN)	Length (IN)	Shipped Qty (LBS)
81569308		MA010096684		16			194.01

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

Certified Inspection Report

12/03/10
09:15:28

Alcoa Inc.
Massena Operations
Park Avenue East, Massena, NY 13662



Customer
Castle A M & Co

Customer P.O. No.
75780

Customer Part No.
(8808)

Alcoa Order No.
MMC-95695- -005

Govt. Contract No.

NOTES:

Mercury is not a normal contaminant in aluminum alloys and neither it nor any of its compounds are used in the manufacture of our product.
This alloy meets the requirements of EU 2002/95/EC (RoHS) and EU 2000/53/EC for lead, mercury, cadmium and hexavalent chromium.

Castle Metals FP

HEAT NUMBER N/A 0100966 84
MECHANICAL ID _____
ITEM CODE 8808
LOT NUMBER _____
PO NUMBER 75780
RECEIPT DATE 12-7-2010
SUPPLIER ALCOA
SPECIFICATION _____
LCS NO
COMMENT _____
APPROVED DT

Certified Inspection Report

12/03/10
09:15:28

Alcoa Inc.
Massena Operations
Park Avenue East, Massena, NY 13662



Customer Castle A M & Co	Customer P.O. No. 75780	Customer Part No. (8808)	Alcoa Order No. MMC-95695- -005	Govt. Contract No.
Ship To A. M. Castle & Company 3400 North Wolf Road Bay #7 Franklin Park, IL 60131			We hereby certify that the material covered in this report has been inspected in accordance with, has been found to meet the applicable requirements described herein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and have the mechanical properties shown on the face of this sheet. Manufactured under an ISO/QS-9000 registered quality management system. Melted and manufactured in the USA. Thomas J. Klemp, Quality Assurance Manager	

Date Shipped 12/03/10	Weight Shipped 2,246 lbs	Product CFRB-CF ROD	Specific Length	BOL 000159003
Alloy - Temper 7075-T7351	Size 3.50000 IN	Shape DIA	Config 12 FT	QRR

Specifications:

A97075-11 Rev 10 w/exc & comments per T
Klemp email dtd 1/5/10
Material conforms to T73 requirements
Minimum mechanical properties to apply:
68 KSI Tensile Strength
56 KSI Yield Strength
10% Elongation
AMS 4124D (Except Size)
QQA-225/9E (Except Size)
ASTM B211-03 (Except Size)
AMS-QQA-225/9 (Except Size)

Product produced and marked to the requirements of AMS-QQ-A-225/9 also meets the requirements of QQ-A-225/9.
Product produced and marked to the requirements of QQ-A-225/9 also meets the requirements of AMS-QQ-A-225/9.

TEST REQUIREMENTS	Test	Test	Test	Test	Test	Test	Test	Test	Test	Test
	U.T.S.	T.Y.S.	%Elong	Cond						
Max:		67.9								
Min:	68.0	56.0	10.0	38.0						

Test Results	No. of Tests	Test	Test	Test	Test	Test	Test	Test	Test	Test
Lot / Work Order		U.T.S.	T.Y.S.	%Elong	Cond					
MA010096684	1	71.8	60.9	13.0	41.4					
Max:		71.8	60.9	13.0	41.4					
Min:		71.8	60.9	13.0	41.4					

TEST ABBREVIATIONS

U.T.S. Ultimate Tensile Strength KSI
Cond Conductivity % IACS

T.Y.S. Tensile Yield Strength KSI

%Elong Elongation % in 2"

Aluminum Association Chemical Composition Limits (in Weight %)

ALLOY	MAX	%SI	%FE	%CU	%MN	%MG	%CR	%ZN	%TI	%Others	%Others	%AL			
7075	MIN	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15	Rem			
				1.2		2.1	0.18	5.1		Each	Total				

Actual Started Chemistry

LOT/WORK ORDER	MAX	%SI	%FE	%CU	%MN	%MG	%CR	%ZN	%TI	%OE	%OT	%AL			
MA010096684	MIN	0.09	0.18	1.4	0.02	2.4	0.21	5.7	0.02	LT 0.05	LT 0.15	Rem			
		0.08	0.16	1.4	0.02	2.3	0.19	5.5	0.02						

